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### UNITED STATES PATENT AND TRADEMARK OFFICE

### BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CAINE M. FINNERTY, REBECCA L. SHARP, and BENJAMIN J. EMLEY<sup>1</sup>

Appeal 2015-007567 Application 13/073,070 Technology Center 1700

Before KAREN M. HASTINGS, CHRISTOPHER C. KENNEDY, and BRIAN D. RANGE, *Administrative Patent Judges*.

KENNEDY, Administrative Patent Judge.

#### **DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 30–37. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

#### **BACKGROUND**

The subject matter on appeal relates to foamed ceramic or cermet bodies, which can be used as anodes for solid oxide fuel cells ("SOFC"), and associated methods of molding. *E.g.*, Claims 30, 35. Claims 30 and 35 are

<sup>&</sup>lt;sup>1</sup> According to the Appellants, the real party in interest is WATT Fuel Cell Corp. App. Br. 1.

reproduced below from pages 28–29 (Claims Appendix) of the Appeal Brief:

- 30. A method of molding a ceramic or cermet body which comprises:
  - a) preparing a ceramic body-forming or cermet body-forming composition comprising (i) at least one particulate ceramic or particulate cermet, (ii) at least one binder, (iii) at least one dispersant; and (iv) at least one solvent;
  - b) chilling the composition;
  - c) dissolving carbon dioxide gas in the chilled composition under pressure while said composition is in a fluid state;
  - d) confining dissolved carbon dioxide-containing chilled composition while under pressure and in a fluid state within a pressure-tight mold;
  - e) releasing dissolved carbon dioxide gas from the composition while said composition is undergoing transition within the mold from a fluid state to a semi-rigid state, the release of carbon dioxide gas resulting in the formation of spherical voids in the semi-rigid composition; and,
  - f) allowing the spherical void-containing semi-rigid composition to undergo transition within the mold from the semi-rigid state to a rigid state thereby providing a molded body having individual spherical voids and/or voids formed from the intersection, or conjunction, of two or more spherical voids entrained therein in random distribution, the molded body being suitable for post-molding processing.
- 35. A foamed ceramic or cermet anode obtained by the process of Claim 30.

#### REJECTIONS ON APPEAL

- 1. Claims 30–34 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Brundage<sup>2</sup> in view of Park,<sup>3</sup> Chou,<sup>4</sup> and Nitta.<sup>5</sup>
- 2. Claims 35–37 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Finnerty<sup>6</sup> in view of Brundage, Park, Chou, and Nitta.

### **ANALYSIS**

After review of the cited evidence in the appeal record and the opposing positions of the Appellants and the Examiner, we determine that the Appellants have not identified reversible error in the Examiner's rejections. Accordingly, we affirm the rejections for reasons set forth below, in the Final Action, and in the Examiner's Answer. *See generally* Final Act. 2–9; Ans. 2–7.

## I. Rejection 1

The Appellants' arguments concern limitations appearing in claims 30, 32, and 33. We limit our discussion to those claims. Claims 31 and 34 depend from claim 30 and will stand or fall with claim 30.

<sup>&</sup>lt;sup>2</sup> Brundage et al., US 2010/0056355 A1, published Mar. 4, 2010.

<sup>&</sup>lt;sup>3</sup> Young-Wook Kim and Chul B. Park, *Processing of microcellular preceramics using carbon dioxide*, 63 Composites Sci. & Tech. 2371 (2003). Consistent with the nomenclature of the Examiner and the Appellants, we refer to this reference as "Park."

<sup>&</sup>lt;sup>4</sup> Chou, US 2012/0135854 A1, filed Nov. 29, 2010.

<sup>&</sup>lt;sup>5</sup> Osamu, JP 2008-293828, published Dec. 4, 2008. Consistent with the nomenclature of the Examiner and the Appellants, we refer to this reference as "Nitta." Citations are to the English machine translation of record.

<sup>&</sup>lt;sup>6</sup> Finnerty et al., US 7,498,095 B2, issued Mar. 3, 2009.

### A. Claim 30

In the Final Action, the Examiner finds, *inter alia*, that Brundage teaches a method of molding a ceramic or cermet body comprising each element of claim 30 except that Brundage does not explicitly teach chilling the composition before dissolving carbon dioxide in the composition. Final Act. 3.

The Examiner finds that Park teaches dissolving carbon dioxide into ceramic compositions and then forming microvoids by introducing a thermodynamic instability. *Id.* at 4. The Examiner finds that Park's method "contemplates direct manipulation of the composition on a pressure and temperature phase diagram so as to dissolve carbon dioxide at pressure and temperature, and then adjusting one or both so that the gas bubbles out of the solution to form a foam." *Id.* 

The Examiner finds that Chou concerns forming a porous ceramic article using an inert gas, but does so at lower pressures of 10 psig to about 50 psig (approximately 1.68 atm to 4.40 atm). *Id*.

The Examiner finds that Nitta, which concerns electrodes for SOFCs, "teaches that dissolving CO<sub>2</sub> into solution is best done at colder temperatures, such as 10 °C or less, so as to increase the amount of dissolved gas and therefore increase the porosity." *Id*.

Based on those teachings and the knowledge of a person of ordinary skill in the art, the Examiner determines that the method of claim 30 would have been obvious to a person of ordinary skill in the art. The Examiner explains:

While Brundage works with liquefied CO<sub>2</sub> under high pressure, Chou and the other cited prior art references provide motivation for moving away from the very high pressure used in Brundage towards cheaper, safer, lower pressures and temperatures. It, therefore, would have been obvious to one of ordinary skill in the art to chill the composition to 10 °C with the motivation to increase the dissolved carbon dioxide gas while being able to work in lower pressure environments than that taught in Brundage, so as to reduce costs and improve safety.

Id.

After providing a detailed discussion of the prior art references, *see* App. Br. 6–19, which we have reviewed and considered, the Appellants present several arguments in opposition to the Examiner's rejection, which we address in turn below:

1. The Appellants argue that, "unlike appellants' claimed process, Brundage's carbon dioxide gas is **not dissolved** in the CPBM [ceramic precursor batch material] composition before the gas is released therefrom but is present therein as a **liquefied gas** (requiring the application of high pressure) prior to such pressure being reduced and the liquefied carbon dioxide becoming a pore-forming gas." App. Br. 20 (emphasis in original).

That argument is not persuasive of reversible error because it does not address the Examiner's rationale. The Examiner recognizes that "Brundage works with liquefied CO<sub>2</sub> under high pressure" but finds that a person of ordinary skill in the art would have been motivated by the other references to use known temperature and pressure principles to dissolve CO<sub>2</sub> gas into the CPBM rather than using liquefied CO<sub>2</sub> at high pressure. *See* Final Act. 4; Ans. 3–4. Thus, the fact that Brundage itself discloses liquefied gas is not indicative of reversible error in the Examiner's rejection. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981) ("[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.").

2. The Appellants explain that "Brundage's pore-forming gas is only released after the CPBM has been formed into a green body/semi-rigid state." App. Br. 20. They argue that neither Brundage nor the other references teach (1) "releasing dissolved carbon dioxide gas from the composition while said composition is undergoing transition within the mold from a fluid state to a semi-rigid state," as recited by element (e) of claim 30, or (2) "allowing the spherical void-containing semi-rigid composition to undergo transition within the mold from the semi-rigid state to a rigid state," as recited by element (f) of claim 30. *Id.* at 21–22.

We agree with the Appellants that Brundage's pore-forming gas is released after formation of a green body. *See* App. Br. 11–12. However, under the broadest reasonable interpretation of claim 30 consistent with the Specification, we are not persuaded that the release of gas from Brundage's green body does not fall within the scope of step (e) of claim 30. Step (e) requires that the gas be released "while said composition is undergoing transition . . . from a fluid state to a semi-rigid state." It does not require that the gas be released before the transition begins. Nor does it require that gas be released at any specific point in the transition, as long as gas is released during the transition.

The Appellants do not identify any definition in the Specification of "semi-rigid." As the Examiner points out, Ans. 4, the only relevant example provided in the Appellants' Specification teaches that carbon dioxide gas is introduced under pressure to a chilled slurry and, "[a]fter the slurry has undergone transition from its initially fluid state to a semi-rigid state . . . the pressure within the mold is reduced." Spec. ¶ 91 (emphasis added). The Specification states that the example is "presented for the purposes of

description and illustration of the invention." Id. ¶ 89. Although the example appears to conflict with claim 30 in that the example states that gas is released "after" transition to a semi-rigid, while claim 30 recites that gas is released "while" the transition to a semi-rigid state is occurring, at a minimum claim 30 appears to encompass processes in which the gas is released late in the transition from fluid state to semi-rigid state.

Brundage teaches that, after carbon dioxide is introduced to the CPBM, pressure is maintained until a green body is formed, after which pressure is released. *See*, *e.g.*, Brundage ¶¶ 10; 15; App. Br. 12. "Finally, the green body is dried and fired." Brundage ¶ 10; *see also id*. ¶ 16 ("[T]he method of the present invention may further comprise the step of drying the green body before firing.").

We have reviewed the portions of the Reply Brief in which the Appellants attempt to establish that Brundage's green body corresponds to the "rigid state" of claim 30 (element (f)), *see* Reply Br. 10–13, but we are not persuaded of reversible error in the Examiner's position. The Appellants cite a variety of references, but they do not specifically identify which reference, if any, plainly supports their position that a green body is fully self-supporting. *See id.* at 11–13.

The references support the notion that a green body has not yet been fired or sintered, but they do not persuasively suggest that a pre-firing ceramic composition that is transitioning from fluid state to semi-rigid state would not have been considered a green body at some point prior to fully completing the transition. If anything, at least some of the references suggest that the term "green body" is broad and encompasses the ceramic mixture at any point prior to firing/sintering. *See, e.g.*, Reply Br. 12 (citing

U.S. Patent No. 5,525,374 at 6:30–44 ("[T]he term green body refers to an unsintered body of ceramic powder.")). Brundage's teaching that its green body, at least in certain embodiments, is not dry suggests that Brundage's green body is still completing the transition "from a fluid state to a semirigid state," as required by element (e) of claim 30. *See, e.g.*, Brundage ¶¶ 10, 16. The Appellants do not persuasively explain how that interpretation of green body conflicts with the understanding of that term that a person of ordinary skill in the art would have had at the time of the invention. *See* Ans. 4–5 ("While applicant makes much of the differing terminology in the claim (the undefined 'semi-rigid' state) and Brundage (green body), the process is fundamentally the same."). The subsequent drying step taught by Brundage appears to be equivalent to element (f) of claim 30. *See id.*; *see also* Final Act. 3 (citing Brundage ¶¶ 30–32, which discuss drying, as corresponding to element (f) of claim 30).

Thus, on this record, and consistent with the Examiner's findings, we are not persuaded of reversible error in the Examiner's determination that the prior art teaches or suggests elements (e) and (f) of claim 30.

3. The Appellants argue that claim 30 requires "spherical voids," and that none of the references discloses spherical voids. *See* App. Br. 20–21.

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<sup>&</sup>lt;sup>7</sup> The breadth of the term "green body" is further indicated by the fact that the Appellants appear to agree that it can refer to multiple different pre-firing/sintering states of a ceramic composition. For example, in the Appeal Brief the Appellants equate a green body with the "semi-rigid" state of element (e) of claim 30. *See* App. Br. 11. As noted above, in the Reply Brief the Appellants equate a green body with the "rigid state" of element (f) of claim 30. *See* Reply Br. 10.

That argument is not persuasive of reversible error. As an initial matter, we note that claim 30 does not require that all voids are spherical. It simply requires that the release of gas "result[] in the formation of spherical voids." Thus, the formation of at least some spherical voids is sufficient. The Examiner interprets claim 30 in that manner, *see* Final Act. 8; Ans. 5–6, and the Appellants do not persuasively challenge that interpretation.

Nor does claim 30 require the voids to be perfectly spherical. The Specification states that "[t]he expression 'spherical voids' is used herein to differentiate over irregularly shaped 'pores' such as those resulting from the burning out of binder," which is a different method of forming voids. *See* Spec. ¶ 31. The Specification further discloses that "voids resulting from the release of dissolved carbon dioxide gas from an electrode-forming composition *will by nature be spherical*." *Id.* ¶ 29 (emphasis added). Thus, the Specification indicates that voids formed by the release of gas will be spherical and fall within the scope of the term "spherical void," while voids formed by other methods may be irregular and fall beyond the scope of the term "spherical void." *Id.* ¶¶ 29–30.

In arguing that the references do not disclose spherical voids, the Appellants focus primarily on Chou and Park, arguing that figures 4 and 6 of Chou, and Figure 11 of Park, depict irregular pores. See App. Br. 20–21. The figures of Chou lack clarity and are not particularly probative. See Chou Figs. 4, 6. While we agree that they appear to depict at least some pores that are irregular in shape, at least some of the pores arguably appear to be at least roughly spherical in nature. See id. Moreover, Chou describes the pores with reference to their diameters. E.g., id. ¶ 19. We are not

persuaded that Chou suggests that spherical pores would not be obtained by the process of Brundage as modified by Park, Chou, and Nitta.

Figure 11 of Park is clearer than the figures of Chou. At least some of the pores depicted by Park appear to be at least generally spherical in nature. *See* Park at 2375 (Fig. 11). Contrary to the Appellants' assertions, we are not persuaded that Park suggests that spherical pores would not be obtained by the process of Brundage as modified by Park, Chou, and Nitta.

The Appellants acknowledge that Brundage does not specifically describe the shape of its pores. See App. Br. 13. However, other than the references to the figures of Chou and Park discussed above, the Appellants provide no explanation as to why a person of ordinary skill in the art would not have expected at least some of the pores formed by the method of Brundage as modified by Park, Chou, and Nitta, to be spherical. In view of our discussion of green bodies above, the method of Brundage as modified by Park, Chou, and Nitta falls within the scope of claim 30. As the Examiner explains, the gas formed by releasing the dissolved carbon dioxide would be expected to form spherical bubbles within the ceramic composition to create the pores. See Ans. 5. The Appellants do not persuasively dispute that released gas would be expected to form spherical bubbles, and they provide no persuasive explanation as to why a spherical bubble would not be expected to result in at least some spherical pores that fall within the scope of claim 30. On the contrary, and as noted above, the Appellants' Specification states that "voids resulting from the release of dissolved carbon dioxide gas from an electrode-forming composition will by nature be spherical." Spec. ¶ 29 (emphasis added).

Thus, in view of the arguments presented, we determine that a preponderance of the evidence supports the Examiner's finding that release of dissolved carbon dioxide gas, such as in the method of Brundage as modified by Park, Chou, and Nitta, would have been expected to result in at least some spherical voids falling within the scope of claim 30. Cf. In re Best, 562 F.2d 1252, 1255 (CCPA 1977) ("Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product."). The fact that the references may not expressly describe the voids as spherical does not persuade us otherwise. See KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418–19 (2007) ("[T]he [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.").

4. The Appellants argue that the Examiner fails to explain "why it would have been obvious to substitute Brundage's use of liquefied carbon dioxide gas as a pore forming agent in a ceramic composition with Park's use of dissolved carbon dioxide gas as a pore forming agent in a non-ceramic material." App. Br. 21.

That argument is not persuasive because it does not meaningfully rebut the Examiner's rationale. *Cf. In re Keller*, 642 F.2d 413, 425 (CCPA 1981) ("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference . . . . Rather, the test is what the combined teachings of the

references would have suggested to those of ordinary skill in the art."). As explained above, the Examiner finds that Park, Chou, and Nitta "provide motivation for moving away from the very high pressure used in Brundage towards cheaper, safer, lower pressures and temperatures," and that it "would have been obvious to one of ordinary skill in the art to chill the composition to 10 °C with the motivation to increase the dissolved carbon dioxide gas while being able to work in lower pressure environments than that taught in Brundage, so as to reduce costs and improve safety." *See* Final Act. 4.

5. The Appellants argue that "[t]he Examiner also fails to explain why one skilled in the art would be led to combine (1) Chou's pore-forming process which expressly excludes the use of carbon dioxide as a pore-forming agent with Brundage's use of carbon dioxide as a pore forming agent, or (2) Nitta's chemical decomposition of metal carbonate to generate carbon dioxide pore forming agent with Brundage's use of liquefied carbon dioxide gas as pore-forming agent." App. Br. 21–22.

Those arguments are not persuasive because they misstate the Examiner's rationale. *Cf. Keller*, 642 F.2d at 425. The Examiner does not propose combining Chou's pore-forming process with Brundage. Nor does the Examiner propose combining Nitta's chemical decomposition process with Brundage's use of liquefied carbon dioxide. As explained above, the Examiner relies on Chou, Nitta, and Park for the general proposition that it was known that carbon dioxide could be dissolved in compositions by manipulating temperature and pressure, and it could be done at lower pressures (thereby reducing costs and improving safety) than those disclosed by Brundage alone. For reasons discussed throughout this decision, the

Appellants do not persuasively identify reversible error in the Examiner's rationale.

6. In the Reply Brief, the Appellants argue for the first time that "liquid carbon dioxide is absolutely necessary" for the method of Brundage and "is not interchangeable" with a method using dissolved carbon dioxide gas." *See* Reply Br. 3.

That argument was not raised in the Appeal Brief notwithstanding the fact that the Examiner relied on the disputed rationale in the Final Action. *See* Final Act. 4 (acknowledging that "Brundage works with liquefied CO<sub>2</sub>" and determining that the other prior art references motivate the use of dissolved carbon dioxide gas). The Appellants fail to establish good cause for presenting it for the first time in the Reply Brief. Accordingly, it is untimely and is waived. *See* 37 C.F.R. § 41.41(b)(2).

Even if the argument were timely, it would not be persuasive. The Appellants provide no persuasive evidence or reasoning that liquid carbon dioxide is "absolutely necessary" for the process of Brundage. *See In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) ("Attorney's argument in a brief cannot take the place of evidence."). Nor do they argue that it would have been beyond the ordinary level of skill in the art to modify the process of Brundage to use dissolved gaseous CO<sub>2</sub> rather than liquid CO<sub>2</sub>.

Brundage's disclosure of liquid CO<sub>2</sub> does not teach away from or discourage the use gaseous CO<sub>2</sub>. *Cf. In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) ("The prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed . . . .").

\* \* \*

In summary, we have carefully considered the Appellants' arguments concerning the Examiner's rejection of claim 30, and we conclude that a preponderance of the evidence supports the Examiner's findings and conclusions. We affirm the rejection.

### B. Claims 32 and 33

Claims 32 and 33 depend, directly or indirectly from claim 30, and further specify that "the ceramic-forming or cermet-forming composition is chilled to a temperature of from -10° C to 12° C prior to introducing carbon dioxide gas therein, the carbon dioxide gas being dissolved in the chilled composition at a partial pressure of from 0.5 to 5 atm."

The Examiner finds that Nitta teaches dissolving CO<sub>2</sub> at temperatures of 10 °C or less to increase the amount of dissolved gas and porosity. *See* Final Act. 5. The Examiner determines that it would have been obvious "to chill the composition to 10 °C with the motivation to increase the dissolved carbon dioxide gas while being able to work in lower pressure environments than that taught in Brundage, so as to reduce costs and improve safety." *Id.* 

The entirety of the Appellants' argument is that "there is not the slightest hint" in the prior art of the "specific ranges of chilling temperatures and partial pressures" recited by claims 32 and 33. App. Br. 23.

That argument is not persuasive because it does not meaningfully address the Examiner's findings and conclusions. *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (holding that "the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art"). As discussed

above, the Examiner finds that Nitta motivates chilling at temperatures that fall within the scope of claims 32 and 33, and that the art as a whole motivates the use of lower pressures such as those claimed "to reduce costs and improve safety." Final Act. 4. Moreover, the Examiner finds that Chou teaches the use of pressures (about 10 psig to about 50 psig) that appear to fall within the scope of claims 32 and 33. *See* Final Act. 4.

We affirm the Examiner's rejection of claims 32 and 33.

## II. Rejection 2

Claims 35–37 are product-by-process claims that recite "a foamed ceramic or cermet anode obtained by the process of Claim [30/31/32]." The Examiner apparently finds that none of the references relied on in Rejection 1 expressly discloses the use of foamed ceramic bodies as anodes. See Final Act. 6. The Examiner finds that Finnerty teaches a foamed ceramic anode made by a process different from that of claim 30. Id. The Examiner appears to find that Finnerty's product is the same as the product of claims 35–37 notwithstanding the fact that it is made by a different process, and that it therefore teaches or otherwise renders obvious claims 35–37. Id. The Examiner further finds that, "in any case," because the method of claims 30–32 is obvious for reasons discussed with respect to Rejection 1, "it would have been obvious that the porous anode disclosed in Finnerty could have been made via a method such as the one claimed in [claims] 30–34 with the motivation to use a carbon dioxide direct foaming method in place of pore-forming agents as it is a viable alternative as taught in Brundage, Park, and Nitta for forming spherical voids within ceramic green bodies . . . that avoids the well-known problems of micro-crack formation when using traditional pore-formers." *Id.* at 6–7.

The Appellants first argue that the foamed ceramic anodes formed by the process of claims 30–34 are structurally different from the foamed ceramic anodes of Finnerty because the anodes of claims 35–37 do not possess microcracks or carbon residues that the anodes of Finnerty would have been expected to possess. *See* App. Br. 23–26. They then argue that Finnerty's pore-forming method (involving traditional sintered poreformers) is different from the gas-release pore-forming method of the prior art, and that "[t]he final rejection offers no explanation how these entirely disparate pore forming procedures can be combined so as to evidence the obviousness of the anodes of appealed Claims 35–37." *Id.* at 26.

Even assuming that the Appellants are correct that anodes formed according to Finnerty's method possess microcracks and carbon residues that render them structurally distinguishable from the anodes of claims 35—37, the Appellants' argument fails to persuade us of reversible error in the Examiner's rejection. Contrary to the Appellants' suggestion, the Examiner does not propose combining Finnerty's method with the gas-release method rendered obvious by the prior art. Rather, the Examiner finds that, because Finnerty teaches that porous ceramics are known to be used as anodes, it would have been obvious to use structurally-similar porous ceramics made by a different process (i.e., that of Brundage as modified by Park, Chou, and Nitta) as anodes. The Appellants' argument does not persuasively refute that rationale.

Moreover, we note that the word "anode" in claims 35–37 is an intended use of the foamed ceramic bodies produced by the methods of claims 30–32. "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469

(Fed. Cir. 1990) (emphasis in original). The Appellants fail to persuasively identify a structural or compositional difference between the foamed ceramic anodes of claims 35–37 and the foamed ceramic bodies produced according to the process rendered obvious by Brundage as modified by Park, Chou, and Nitta. *Cf. Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999). The Appellants do not argue that foamed ceramic bodies produced according to the process of Brundage as modified by Park, Chou, and Nitta would not have been suitable for use as anodes.

On this record, we are not persuaded of reversible error in the Examiner's rejection of claims 35–37.

### CONCLUSION

We AFFIRM the Examiner's rejections of claims 30–37.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

## **AFFIRMED**